

## CLAIMS

### WHAT IS CLAIMED

1. A method of acquiring and processing electrical signals produced by a patient's heart, the method comprising:

attaching six electrodes to the patient, each one of the six electrodes being attached in one of the standard ten-electrode, twelve-lead electrocardiogram positions;

acquiring electrical signals from the electrodes;

providing eight leads of a twelve-lead electrocardiogram from the acquired electrical signals; and

interpolating four leads of the twelve-lead electrocardiogram from the acquired electrical signals.

2. The method of claim 1 and further comprising interpolating four leads of the twelve-lead electrocardiogram that correspond to four electrodes that are not attached to the patient.

3. The method of claim 1 and further comprising attaching four limb electrodes to the patient.

4. The method of claim 1 and further comprising providing at least one left precordial lead without performing interpolation and at least one right precordial lead without performing interpolation.

5. The method of claim 1 and further comprising attaching electrodes at standard positions for V5 and V6, and interpolating leads V1, V2, V3 and V4.

6. The method of claim 1 and further comprising attaching electrodes at standard positions for V2 and V5, and interpolating leads V1, V3, V4 and V6.

7. The method of claim 1 and further comprising attaching electrodes at standard positions for V1 and V5, and interpolating leads V2, V3, V4 and V6.

8. A method of acquiring and processing electrical signals produced by a patient's heart, the method comprising:

acquiring electrical signals for limb leads of a twelve-lead electrocardiogram;

acquiring electrical signals for at least two standard precordial leads of the twelve-lead electrocardiogram; and

interpolating any remaining leads of the twelve-lead electrocardiogram from the acquired electrical signals.

9. The method of claim 8 and further comprising acquiring electrical signals for limb lead I and limb lead II.

10. The method of claim 8 and further comprising acquiring electrical signals for a left precordial lead and a right precordial lead.

11. The method of claim 8 and further comprising acquiring electrical signals for precordial lead V2 and precordial lead V6.

12. The method of claim 8 and further comprising acquiring electrical signals for precordial lead V2 and precordial lead V5.

13. The method of claim 8 and further comprising interpolating at least two precordial leads.

14. The method of claim 8 and further comprising interpolating at least three precordial leads.

15. The method of claim 8 and further comprising providing at least leads I, II, V2 and V5 from the acquired electrical signals without performing interpolation.

16. The method of claim 15 and further comprising providing lead V3 without performing interpolation.

17. The method of claim 16 and further comprising providing lead V1 without performing interpolation.

18. The method of claim 17 and further comprising providing lead V6 without performing interpolation.

19. A device for acquiring and processing electrical signals produced by a patient's heart, the device comprising:

six electrodes each for attachment to the patient in one of the standard ten-electrode, twelve-lead electrocardiogram electrode positions; and

a signal processor connected to the six electrodes, the signal processor acquiring electrical signals from the electrodes, providing eight leads of a twelve-lead electrocardiogram from the acquired electrical signals, and interpolating four leads of the twelve-lead electrocardiogram from the acquired electrical signals.

20. A device for acquiring and processing electrical signals produced by a patient's heart, the device comprising:

a plurality of electrodes each for attachment to the patient in one of the standard ten-electrode, twelve-lead electrocardiogram electrode positions; and

a signal processor connected to the plurality of electrodes, the signal processor acquiring electrical signals for limb leads of a twelve-lead electrocardiogram, acquiring electrical signals for at least two precordial leads of the twelve-lead electrocardiogram, and interpolating any remaining leads of the twelve-lead electrocardiogram from the acquired electrical signals.